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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/772,739
Filing Date: May 10, 2004
Appellant(s): GIARDINO, DAVID A.

Jeffrey Washville and Arlen Olsen
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/30/2007 appealing from the Office action mailed 7/12/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

This appeal involves claims 56-61 and 70-73.

Claims 62-64 and 67 withdrawn from consideration as not directed to the elected invention.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2,727,598	Mitchell et al.	12-1955
3,989,113	Spring, Sr. et al.	11-1976
4,434,858	Whitehouse	3-1984

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 56-61 and 70-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al. (US 2,727,598) in view of Spring et al. (US 3,989,113).

With regard to claim 56, Mitchell et al. discloses a method of using a modular control apparatus (12) comprising the steps of:

Providing a modular control apparatus (12), aligning, attaching and adjusting the output the modular control apparatus (see fig. 1) to a tool (11), and applying the tool to a workpiece (18, 19) as shown in Figure 1 wherein the apparatus is configured to shut off air flow to a tool after a selected time that torque is being applied by the tool (col. 5, lines 48-51, 55-59, 65-67).

The reference of Mitchell et al. discloses all claimed subject matter but specific teaching of a modular apparatus having a valve in fluid communication with the tool, and adjusting the flow restriction with the valve to control the output of the modular control apparatus.

However, Spring et al. teaches a method including a valve (27) in fluid communication with the tool (10 Fig. 1), and adjusting the flow restriction with the valve (27) (see col. 3, lines 31-43) to control the output of the modular control apparatus to a tool as shown in Figure 1, and applying the tool to a workpiece (col. 3, line 41).

In view of the teaching of Spring et al., it would have been obvious to one skilled in the art at the time of the invention to modify the valve of the pneumatic tool of Mitchell et al. by forming a valve in fluid communication with the tool, and adjusting the flow restriction with the valve to control the output the modular control apparatus to a tool, in order to control the volume of air flow to the motor.

With regard to claim 57, the modified reference of Mitchell et al. includes the modular control being attached and detached from the tool via screws (12a), and the modular control apparatus is capable of being aligned, attached, adjusted to a second tool and applied to the second tool to a workpiece.

With regard to claims 58 and 59, the modified reference of Mitchell et al. includes a step of providing fluid and/or air to the modular control apparatus through the fitting (21).

With regard to claim 60, the reference of Mitchell et al. includes a method of using a pneumatic modular control apparatus comprising the steps of: attaching a pneumatic modular control apparatus (12) to a pneumatic tool (11) (see fig. 1) wherein the apparatus is configured to shut off air flow to a motor of tool in response to a selected time that torque is being applied by the tool (col. 5, lines 48-51, 55-59, 65-67); connecting a compressed-air supply channel (23) to an input port (23), channeling a compressed-air discharge from a discharge port to the tool's motor inlet.

The reference of Mitchell et al. discloses all claimed subject matter but specific teaching of a modular apparatus having a valve in fluid communication with the tool, and adjusting the flow rate of the valve to control the output of the modular control apparatus.

However, Spring et al. teaches a method including having a valve (27) in fluid communication with the tool (10), and adjusting the flow rate of the valve (27) by setting the valve position (see col. 3, lines 47-51) to control the apparatus and applying the tool to the workpiece as shown in Figure 1.

In view of the teaching of Spring et al. it would have been obvious to one skilled in the art at the time of the invention to provide the modular control apparatus of Mitchell et al. with a valve in fluid communication with the tool, and adjusting the flow rate of the valve by setting the valve position to control the output the control apparatus in order to control the volume of air to the motor.

With regard to claim 61, the modified reference of Mitchell et al. includes attaching a workpiece (18, 19) adapter (16 fig. 1) to at least drive shaft (14) of the motor of the tool.

With regard to claim 70, Mitchell et al. discloses a method of using a modular control apparatus (12) comprising the steps of:

Providing a modular control apparatus (12) having an alignment mechanism formed by the screws (12a) for aligning the modular control apparatus with a tool (11), wherein the apparatus is configured to shut off air flow to a tool after a selected time that torque is being applied by the tool (col. 5, lines 48-51, 55-59, 65-67) by a valve (29) in fluid communication with the tool (11), attaching and applying the tool to a workpiece (18, 19) as shown in Figure 1.

The reference of Mitchell et al. discloses all claimed subject matter but specific teaching of a modular apparatus varying the flow restriction of the valve to control the output of the modular control apparatus.

However, the reference of Spring et al. teaches a method including varying the flow restriction of the valve (27) (see col. 3, lines 47-50) to control the output the control apparatus to a tool (10).

In view of the teaching of the Spring et al., it would have been obvious to one skilled in the art at time of the invention to provides the tool of Mitchell et al. with a method including varying the flow restriction of the valve (27) (see col. to control the output the control apparatus in order to control the volume of air flow to the motor.

With regard to claim 71, the modified reference of Mitchell et al. includes an adapter (16) and attaching the adapter (16) to the tool (11).

With regard to claim 72, the modified reference of Mitchell et al. includes a method of aligning, attaching and adjusting the output the modular control apparatus (see fig. 1) to a tool (11), and applying the tool to a workpiece (18, 19) as shown in Figure 1.

With regard to claim 73, the modified reference of Mitchell et al. includes a method of providing a fluidic modular control apparatus (12).

4. Claims 56-61 and 70-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spring et al.(US 3,989,113) in view of Whitehouse (US 4,434,858).

With regard to claim 56, the reference of Spring et al. discloses a method of using a modular control apparatus (13 cover section) comprising the steps of:

Providing a modular control apparatus (13) having a valve (27) in fluid communication with the tool (10), aligning, attaching (see Fig. 1) and adjusting the flow restriction with the valve (27) to control the output of the modular control (see col. 3, lines 31-43).

Spring et al. disclose all claimed subject matter but lacks specific teaching of shutting off air flow to a tool after a selected time that torque is being applied by the tool.

However, Whitehouse teaches torque tool including shutting off air flow to a tool after a selected time that torque is being applied by the tool, for example, "power tool which is capable of responding during its application with minimal time delay in tool shut-off to provide superior uniformity and reliability of operation in precisely setting a workpiece to a degree of tightness" (col. 1, lines 56-60).

In view of the teaching of Whitehouse, it would have been obvious to one skilled in the art at the time of the invention to modify the control apparatus of the tool of Spring et al. by providing the control apparatus the capability of shutting off air flow to a tool after a selected time that torque is being applied by the tool for the benefit as discussed above in Whitehouse.

With regard to claim 57, the modular control of Spring et al. is capable of being attached and detached as shown in Figure 1.

Spring et al. do not expressly state that the modular control apparatus can be aligned, attached, adjusted to a second tool and applied to the second tool to a workpiece, however, the modular control apparatus of Spring et al. is capable of being adjusted to a second tool and applied to a second tool as shown in Figure 1.

With regard to claims 58 and 59, the method of Spring et al. includes a step of providing fluid and/or air to the modular control apparatus (Fig. 1).

With regard to claim 60, the reference of Spring et al. discloses a method of using a pneumatic modular control apparatus comprising the steps of: attaching a pneumatic modular control apparatus (13) to a pneumatic tool (10), and having a valve (27) in fluid communication with the tool (10), connecting a compressed-air supply channel (26) to an input port (Fig. 1), channeling a compressed-air discharge from a discharge port to the tool's motor inlet, and adjusting the flow rate of the valve by setting the valve (27) position (see col. 3, lines 47-51) to control the output the modular control apparatus; and applying the tool to a workpiece.

Spring et al. discloses all claimed subject matter but lacks specific teaching of shutting off air flow to a tool after a selected time that torque is being applied by the tool.

However, Whitehouse teaches torque tool including shutting off air flow to a tool after a selected time that torque is being applied by the tool, for example, "power tool which is capable of responding during its application with minimal time delay in tool shut-off to provide superior uniformity and reliability of operation in precisely setting a workpiece to a degree of tightness" (col. 1, lines 56-60).

In view of the teaching of Whitehouse, it would have been obvious to one skilled in the art at the time of the invention to modify the control apparatus of the tool of Spring et al. by providing the control apparatus the capability of shutting off air flow to a tool after a selected time that torque is being applied by the tool for the benefit as discussed above in Whitehouse.

With regard to claim 61, the method of Spring et al. includes attaching a workpiece adapter (24 nut socket) to at least drive shaft (23) of the motor (14) of the tool.

With regard to claim 70, the reference of Spring et al further discloses a method of using a modular control apparatus comprising the steps of:

Providing a modular control apparatus (14) having a valve (20) in fluid communication with the tool (Fig. 1), aligning, attaching (see Fig. 1) and varying the flow restriction of the valve (27) (see col. 3, lines 47-50) to control the output the modular control apparatus; and applying the tool to a workpiece.

Spring et al. disclose all claimed subject matter but lack specific teaching of shutting off air flow to a tool after a selected time that torque is being applied by the tool.

However, Whitehouse teaches torque tool including shutting off air flow to a tool after a selected time that torque is being applied by the tool, for example, "power tool which is capable of responding during its application with minimal time delay in tool shut-off to provide superior uniformity and reliability of operation in precisely setting a workpiece to a degree of tightness" (col. 1, lines 56-60).

In view of the teaching of Whitehouse, it would have been obvious to one skilled in the art at the time of the invention to modify the control apparatus of the tool of Spring et al. by providing the control apparatus the capability of shutting off air flow to a tool after a selected time that torque is being applied by the tool for the benefit as discussed above in Whitehouse.

With regard to claim 71, the method of Spring et al. includes attaching a workpiece adapter (24 nut socket) to at least drive shaft (23) of the motor of the tool (10).

With regard to claim 72, the modular control of Spring et al. capable of being attached and detached as shown in Figure 1.

Spring et al. do not expressly state that the modular control apparatus is aligned, attached, adjusted to a second tool and applied to the second tool to a workpiece, however, the modular

control apparatus of Spring et al. is capable of being adjusted to a second tool and applied to a second tool as shown in Figure 1.

With regard to claim 73, the method of Spring et al. includes a step of providing fluid to the modular control apparatus (Fig. 1).

(10) Response to Argument

A. Examiner interpretation of the independent claim

During patent examination of the claims, the pending claims must be given their broadest reasonable interpretation consistent with the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). *See also* MPEP § 2111. Moreover, while the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, *this is not the mode of claim interpretation to be applied during examination.* During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004). *See also* MPEP § 2111.01.

Independent claims 56, 60 and 70 recites:

A method of using a modular control apparatus comprising the steps of:
providing a modular control apparatus having a valve in fluid communication with a tool, wherein said apparatus is configured to shut off air flow to the tool after a selected time that torque is being applied by the tool; aligning the modular control apparatus to the tool; attaching the modular control apparatus to the tool; adjusting the flow restriction with rate-of the valve to control the output of the modular control apparatus; and applying the tool to a workpiece.

A method of using a pneumatic modular control apparatus comprising the steps of: attaching the pneumatic modular control apparatus to a pneumatic tool, wherein said modular apparatus includes a device having a valve in fluid communication with the tool, wherein the device is configured to shut off air flow to a motor of the tool in response to a selected time that torque has been applied by the tool has been reached; connecting a compressed-air supply channel to an input port of the pneumatic modular control apparatus; channeling a compressed-air discharge from a discharge port of the pneumatic modular control apparatus to the inlet of a pneumatic motor of the pneumatic tool; adjusting the flow rate of a valve by setting a valve position to control the pneumatic modular control apparatus; and applying the pneumatic tool to the workpiece.

A method of using a modular control apparatus comprising the steps of: providing a modular control apparatus having an alignment mechanism for aligning the modular control apparatus with a tool, wherein said apparatus is configured to shut off air flow to the tool after a selected time that torque is being applied by the tool controlled by a valve in fluid communication with the tool; attaching the modular control apparatus to the tool; varying the flow restriction of the valve to control the output of the modular control apparatus; and applying the tool to a workpiece.

B. The rejection of claims 56, 60 and 70 under 35 U.S.C. § 103(a) is proper and should be affirmed.

Appellant is arguing in page 5 that Mitchellet al. does not teach or suggest every element of the independent claims 56, 60 and 70 that require a method of "adjusting flow restriction with a valve to control the timing and shut off of the madular apparatus".

Appellee is aware that there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). *See also* MPEP § 2143.01.

In this instance, Mitchellet al. disclose the invention as claimed including the steps of:

Providing a modular control apparatus, aligning, attaching and adjusting the output the modular control apparatus (see fig. 1) to a tool (11), and applying the tool to a workpiece as shown in Figure 1 wherein the apparatus is configured to shut off air flow to a tool after a selected time that torque is being applied by the tool (col. 5, lines 48-51, 55-59, 65-67).

The teaching of Spring et al. was chosen to show Appellant that it is obvious to modify a method to include a valve in fluid communication with a tool, and adjusting the flow restriction with the valve (see col. 3, lines 31-43) to control the output of the modular control apparatus to a tool as shown in Figure 1, and applying the tool to a workpiece (col. 3, line 41).

Appellant is further arguing that Mitchellet al. fails to disclose a modular control apparatus because it is integrated into the motor. Appellee is aware that, while Mitchell et al. have not expressly stated that the rear valve block 12 is modular apparatus, Figure 1 clearly shows that the rear valve block 12 is modularly attachable and detachable from the tool by set of screws 12a.

Appellant is arguing that the specification is silent regarding aligning, attaching and adjusting the modular control apparatus. Appellee is aware that, while Mitchell et al. have not expressly stated that the rear valve block 12 is aligned, attached and adjusted, it is inherent that prior to use, the rear valve block 12 is attached to the motor housing by aligning, attaching and adjusted.

Appellant is arguing that Mitchellet al. clearly has no provision to control the time that torque is being applied by the tool. Mitchell et al. disclose as per column 5, lines 45-59 " during the impacting operation of the tool, the valve 29 will correspondingly move rearwardly or to the right to a limted extent as viewed in Figs. 3,4 and 5, every time the inertia ring 46 jumps or is thrust to the right a limited extent, and consequently when the desired degree of tightness of the bolt 17 is attained, the inertia ring 46 due to the sudden and rapid deceleration will thrust the torque control valve 29 the entire distance rearwardly until the valve shoulder 68 seats against the valve seat 69 formed in the forward end of the valve stem bushing 67. When the valve shoulder of the valve 29 is seated, incoming air from the supply passage 23 is cut off from the reverse valve 27, and therefore no motive energy or operating air is supplied to the pneumatic motor" which satisfies the limitation "selected time that torque is applied".

Appellant is further arguing that Mitchell et al. teaches away from the Applicant's method to adjust timing and shut off by adjusting a flow restriction with a valve.

Again, Appellee is aware that there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). *See also* MPEP § 2143.01.

The teaching of Spring et al. (column 3, lines 31-43) was provided to show Appellant that it is obvious to modify the method of Mitchell et al. to include adjust timing and shut off by adjusting a flow restriction with a valve.

Appellant, again is arguing that the claims require "adjusting the flow restriction with the valve to control the output of the modular apparatus". Appellee is aware that to control the output of the modular control apparatus, the modular apparatus must be aligned and attached to the tool. The combination of Mitchell et al. and Spring et al. teach the invention.

Appellant is arguing that mere addition of a valve from Spring et al. to adjust the restriction of flow to the motor combine with teaching of Mitchell et al. does not control the output of the modular apparatus with no effect controlling timing and shutoff.

Appellee is aware that there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). *See also* MPEP § 2143.01.

The disclosure of Mitchell et al. as set forth in the rejection and the teaching of Spring et al. as shown disclosed the Appellant's invention.

Appellant is arguing that Spring et al.'s valve directly restricts flow to the motor and not controlling the flow of the output of the control modulus claimed. Based on the three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). *See also* MPEP § 2143.01.

The teaching of Spring et al. (column 3, lines 31-43) was provided to show Appellant that it is obvious to modify the method of Mitchell et al. to include adjust timing and shut off by adjusting a flow restriction with a valve. The combination of the two references satisfy the claimed limitation as set forth in the rejections. Appellant is influenced by the dissimilarity between the structure of the prior art control modular and Appellant's control modular, however, the rejections as set forth have shown to produce the same method of controlling a torque tool operation with a modular control apparatus, which aims to control torque overshoot.

Appellant has not overcome the *prima facie* burden of obviousness. The Appellee has provided sufficient motivation to reject the claim under the modified reference of Mitchell et al. in view of Spring et al. The § 103(a) rejection of claims 56, 60 and 70 should be affirmed.

Appellant is arguing that Spring et al. does not teach modular apparatus.

Appellee is aware that cap 13, knob 31 of control valve (Figs 1, 2) are all in combination, modular control apparatus. Further, see response to Appellant's argument with respect Spring et al. reference.

As discussed above, there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet,* 149 F.3d at 1357. In this instance, Whitehouse is well within the nature of the prior art and knowledge of person of ordinary skill in the art.

Again, Appellant is influenced by the dissimilarity between the structure of the prior art control modular and Appellant's control modular, however, the rejections as set forth have shown to produce the same method of controlling a torque tool operation with a modular control apparatus, which aims to control torque overshoot.

Whitehouse has been appropriately applied to teach that it is obvious to modify the method of controlling a modular apparatus of Spring et al. to obtain the method as claimed.

Appellant has not overcome the *prima facie* burden of obviousness. The Appellee has provided sufficient motivation to reject the claim under the modified reference of Mitchell et al. in view of Spring et al. The § 103(a) rejection of claims 56, 60 and 70 should be affirmed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

FOR Rinaldi Rada

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